

REMARKS

Applicant respectfully requests reconsideration of the present application in view of the reasons that follow.

Claims 7 and 17 have been cancelled without prejudice or disclaimer. Claims 6, 8 and 15 have been amended. Support for the amendments to claims 6, 8 and 15 can be found at least in original claims 7 and 17. Claims 1, 4-6, 8-10, 12-15 and 18-25 are now pending in this application.

A detailed listing of all claims that are, or were, in the application, irrespective of whether the claim(s) remain under examination in the application, is presented, with an appropriate defined status identifier.

Allowable subject matter

Applicant appreciates the indication that claims 1, 4-5, 18 and 22-23 are allowed, and claims 10, 14 and 24-25 would be allowable if rewritten in independent form.

Rejections under 35 U.S.C. § 103

Claims 6-7 and 19 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,628,460 to Ookawa et al. ("Ookawa"). Claims 8-9, 12-13, 15, 17 and 20-21 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Ookawa in view of U.S. Patent No. 5,797,668 to Higuchi et al. ("Higuchi") and U.S. Patent Application Publication 2002/0097496 to Lu et al. ("Lu"). Applicant respectfully traverses these rejections for at least the following reasons.

As an initial matter, applicant notes that the Patent No. for Higuchi as listed in the prior Office Action is 5,914,759, and that body of the rejection in the present Office Action refers to Figures 17 and 18 of "Higuchi" which are in U.S. Patent No. 5,914,759, not U.S. Patent No. 5,797,668. For the purposes of this response, applicants will presume that the Office Action intended U.S. Patent No. 5,914,759, not U.S. Patent No. 5,797,668, as Higuchi.

Independent claim 6, as amended, recites “a prism structure characterized by a peak angle of greater than 100 degrees and less than 105 degrees and a refractive index of between approximately 1.65 and 1.8.” None of the references cited in the rejection suggest this feature in the context of claim 6, or the unexpected results in suppressing luminance sidelobes due to this combination of recited peak angle range and refractive index range.

Ookawa merely discloses “the vertical angle of the prism is preferably within the range of 80° to 100°” (col. 5, lines 56-58), and “The refractive index of lens portions 3, 4 made of activation curing resin is preferably high, for example, 1.55 or more, preferably 1.6 or more, in view of enhancing the luminance of the planar light source device.” (col. 5, lines 63-67). Ookawa, however, does not disclose the combination of the refractive index and peak angle range as recited in claim 1.

Moreover, Ookawa does not make any suggestion of the effect of peak angle and refractive index in reducing luminance sidelobes, and thus the structure of claim 1 with the recited ranges would not have been obvious in view of Ookawa. As discussed in the present specification on pages 6-7, the combination of increased refractive index and peak angle suppresses sidelobes. In particular FIG. 12 illustrates the effect of increasing the index of refraction and the peak angle in suppressing luminance sides lobes. Ookawa, by contrast, does not appreciate the effect of refractive index and peak angle on side lobes, much less that suppressing sidelobes is based on a combination of increased refractive index and peak angle.

Further, the beneficial effects on reducing sidelobes can be seen even for indices of refraction below 1.75, as the peak angle is increased above 90 to 100 degrees. As can be seen in FIG. 12, for an index of refraction of 1.6, the side lobe is significantly decreased as the peak angle is changed from 90 to 100 degrees. Thus, the unexpected results are realized even for indices of refraction below 1.75.

The references of Higuchi and Lu also fail to disclose the combination of the recited refractive index range and peak angle range as recited in claim 1, and thus fails to cure the deficiencies of Ookawa.

Independent claims 8 and 15 respectively recite “wherein a peak angle of the prism is greater than 100 degrees and less than 105 degrees and the refractive index of the substrate is between approximately 1.65 and 1.8” and “wherein a peak angle of the prism structure is greater than 100 degrees and less than 105 degrees, and the refractive index of the substrate is between approximately 1.65 and 1.8”, and thus are patentable for reasons analogous to claim 1. The dependent claims are allowable for at least the same reasons as their respective independent claims, as well as for further patentable features recited therein.

Applicant believes that the present application is now in condition for allowance. Favorable reconsideration of the application as amended is respectfully requested.

The Examiner is invited to contact the undersigned by telephone if it is felt that a telephone interview would advance the prosecution of the present application.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by a check being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 19-0741. If any extensions of time are needed for timely acceptance of papers submitted herewith, Applicant hereby petitions for such extension under 37 C.F.R. §1.136 and authorizes payment of any such extensions fees to Deposit Account No. 19-0741.

Respectfully submitted,

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